

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

<i>IN RE</i> : INTERCONTINENTAL	§	Lead Case No. 4:19-cv-01460
TERMINALS COMPANY LLC	§	
DEER PARK FIRE LITIGATION	§	

**MEMORANDUM IN SUPPORT OF *BRYANT* PLAINTIFFS' MOTION TO EXCLUDE
OPINIONS AND TESTIMONY OF DEFENDANT'S EXPERT DR. PAOLO ZANNETTI**

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RULES

Federal Rule of Evidence 702	
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Bryant Plaintiffs, individually and on behalf of all others similarly situated, through undersigned counsel, respectfully submit this Memorandum in Support of *Bryant* Plaintiffs' Motion to Exclude Opinions and Testimony of Defendant's Expert Dr. Paolo Zannetti. The opinions of Defense expert Dr. Paolo Zannetti are neither relevant nor reliable, and should be excluded.

I. STATEMENT OF THE FACTUAL AND PROCEDURAL BACKGROUND

Defendant Intercontinental Terminals Company, LLC ("ITC") is the owner and operator of a petrochemical terminal facility in Deer Park, Texas (the "ITC Facility") where a massive fire erupted starting on Sunday, March 17, 2019. As a result of the fire at the ITC Facility, the City of Deer Park issued a Shelter-In-Place Order, which mandated that all Deer Park residents remain indoors and close all doors and windows and other sources of outside air. The Shelter-In-Place Order remained in place until the next morning, Monday, March 18, and Deer Park and La Porte school districts cancelled classes that day.

Meanwhile, the fire at the ITC Facility continued to rage. The tanks on fire contained naphtha (a flammable liquid hydrocarbon mixture), xylene (a solvent and cleaning agent), GBS (gas blend stock, a complex mixture of hydrocarbons), and lubricant oils (a complex mixture of low and high molecular weight hydrocarbons). Late in the day on March 18, the City of Deer Park stated that six tanks remained on fire at the ITC Facility, and on Tuesday, March 19, ITC announced that the fire had spread to two more massive tanks, after the fire had intensified during the night due to a temporary loss of water resources in the firefighting process. One of the two tanks to which the fire had spread contained toluene, a volatile liquid used to make nail polish remover and paint thinner.

The fire continued with an additional flare-up in the evening on Wednesday, March 20,

and early in the morning on Thursday, March 21, Shelter-In-Place Orders were again issued by the cities of Deer Park and Galena Park after elevated levels of benzene and other volatile organic compounds had been detected in air monitoring reports. The Deer Park Police Department barricaded major roads to prevent ordinary travel, and schools remained closed across the area due to environmental concerns.

The Shelter-In-Place Order was eventually lifted by the City of Deer Park on Thursday, March 21, at 11:40 a.m., but firefighters continued to have considerable difficulty in controlling the blaze. On Friday, March 22, the secondary containment dike wall containing the product released during the fire partially collapsed, and additional flare-ups occurred with multiple tanks in the containment area reigniting.

The impact of the massive fires over the 65-hour period was great. In total, 8,655,000 pounds of particulate matter was emitted. As some emissions were carried aloft and downwind, particulate matter was deposited over a large area. Plaintiffs' expert engineer William Auberle used AERMOD, one of the EPA's preferred and recommended dispersion modeling programs, to model the particulate matter emissions from the fires.¹ The modeling resulted in 2 figures used by Plaintiffs for their proposed class certification: (1) a figure depicting the ambient air concentrations of PM 2.5 of 35 micrograms per cubic meter and 70 micrograms per cubic meter averaged over a 24 hour period (Figure 1 of the Auberle report); and (2) a figure depicting the ground-level concentration of particles at a rate of one gram per square meter of surface area or great (Figure 2 of the Auberle report).²

ITC has offered Dr. Zannetti to critique Plaintiffs' expert William Auberle and his models depicting the emissions from the massive fires. However, Dr. Zannetti did not produce his own

¹ <https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models>

² See Exhibit A: Expert Report of William Auberle at Figure 1 and Figure 2.

models and the basis for his critiques are not supported by authority or engineering best practices. Instead, they are exactly the type of *ipse dixit* opinions *Daubert* and Federal Rule of Evidence 702 intend to keep out.

II. STATEMENT OF THE ISSUE AND STANDARD OF REVIEW

A. Statement of the Issue.

Should the expert testimony and reports of Dr. Zannetti be excluded under *Daubert* and the Federal Rules of Evidence?

B. Standard of Review.

Under *Daubert*, “the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S.579, 589 (1993). Federal Rule of Evidence 702 codifies *Daubert*, and specifies that a district court must, as part of its gatekeeping role, determine whether testimony “will help the trier of fact to understand the evidence or to determine a fact in issue”; “is based on sufficient facts or data”; “is the product of reliable principles and methods”; and whether “the expert has reliably applied the principles and methods to the facts of the case.” FED. R. EVID. 702. This extends to “testimony based on ‘technical’ and ‘other specialized’ knowledge.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999).

Testimony must be reliable.

Daubert identifies a non-exclusive list of factors a district court should consider when assessing the reliability of expert testimony. The *Daubert* factors are: (1) whether the theory can or has been tested; (2) whether the theory has been subjected to peer review and publication; (3) the known or potential rate of error; (4) the existence and maintenance of standards and controls; and (5) whether the theory has been generally accepted in the relevant scientific, technical, or

professional community. *Daubert*, 509 U.S. at 593–94. An expert opinion must employ “the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” *Kumho Tire*, 526 U.S. at 152. Additionally, “nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.” *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). Therefore, “[w]hen an expert opinion is based on data, methodology, or studies that are simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony.” *IEX Corp. v. Blue Pumpkin Software, Inc.*, No. 4:01-16, 2005 WL 6426934, at *4 (E.D. Tex. Dec. 14, 2005); *see also Seaman v. Seacor Marine L.L.C.*, 326 F. App’x 721, 724 (5th Cir. 2009).

Testimony must be relevant.

Rule 702 requires that testimony “help the trier of fact to understand the evidence or to determine a fact in issue.” FED. R. EVID. 702(a); *see also Moore v. Ashland Chem., Inc.*, 151 F.3d 269, 275 (5th Cir. 1998). In *Daubert*, the Supreme Court defined “fit” as a relevance inquiry that asks whether, even if an expert’s opinion is reliable, it addresses some issue in the case such that it would be helpful to the trier of fact. 509 U.S. at 587, 591–92; *see also Omnicare*, 2015 WL 5178074 at *12 (Ellison, J.). Stated otherwise, “relevance requires that there be a valid scientific connection to the pertinent inquiry in the case.” *Alexander v. Martin*, No. 2:08-400, 2010 WL 11530305, at *4 (E.D. Tex. June 24, 2010) (citation omitted).

Unsubstantiated Opinions are Not Sufficient

Unsubstantiated opinions based on appeals to an expert’s general experience are insufficient to satisfy the requirements of *Daubert*: an expert’s opinion “must have some

demonstrable and reliable basis in underlying facts.” *LeBlanc ex rel. Est. of LeBlanc v. Chevron USA, Inc.*, 396 F. App’x 94, 100 (5th Cir. 2010) (upholding exclusion of expert opinion based on expert’s personal experience where expert could not provide other substantiation for opinion on causation); *Guile v. United States*, 422 F.3d 221, 227 (5th Cir. 2005) (“we look to the basis of the expert's opinion, and not the bare opinion alone” (internal citation omitted)).

III. SUMMARY OF THE ARGUMENT

Defendant relies on the opinions of Dr. Paolo Zannetti to support their contention that the air models offered by Plaintiffs’ expert William Auberle are inaccurate and the massive ITC fires had little to no impact on the community.³ Dr. Zannetti’s opinions should be excluded as unreliable and irrelevant pursuant to *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), and the Federal Rules of Evidence.

First, throughout Dr. Zannetti’s report and deposition, there are unsubstantiated and unsupported opinions that represent *ipse dixit* at its finest. Dr. Zannetti routinely fails to cite to authority for critiques and blanket propositions.

Second, Dr. Zannetti ignores evidence and authority that does not support his positions without any regard for consistency and without reasoned explanation.

IV. ARGUMENT

Defendant’s expert Dr. Zannetti comes to conclusions that are neither relevant, nor reliable. The majority of his opinions and conclusions are *ipse dixit* or based flawed or insufficient data. His entire opinion represents a critique of Plaintiff’s expert William Auberle’s dispersion/deposition models. Dr. Zannetti did not do his own dispersion or deposition models. He

³ See Exhibit B: Report of Paolo Zannetti, at Conclusion, pp. 103.

is not an engineer.⁴ He has only modeled a limited number of fires in his career.⁵ He is unable to offer support, authority, or citation for his opinions critiquing Mr. Auberle and generally explains that it is “common knowledge.”⁶ Ultimately, he purports to compare evidence and data to the models run by Dr. Auberle as part of an attempt to discredit the models depicting the impacts of the massive fires. However, his opinions do not pass the standards under *Daubert* and Federal Rule of Evidence 702 and should be excluded.

A. Dr. Zannetti’s qualitative opinions are neither relevant, nor reliable.

During his deposition, Dr. Zannetti readily admitted that he has no quantitative opinion on the extent of the impact of the ITC fires. He stated:

I don’t have a quantitative opinion, only qualitative at this point based on the work I have done so far, my examination of pictures and videos, my reading of the data collected by EPA airplanes. So I have a qualitative understanding, but I have not done any quantitative calculation.⁷

Rather than do his own air model, Dr. Zannetti compared photos and videos of unknown origin, location, and angle to say that he believed “only a ... small fraction of the plume had the capability to remain at ground level.”⁸

The use of this type of “evidence” is fatal for multiple reasons. First, comparing photos and videos to air modeling is not part of the engineering methodology for creating or verifying an air model. Second, the photos and videos are inherently unreliable because Dr. Zannetti does not have sufficient information about them to determine their utility. Third, PM 2.5 is not visible to the naked eye such that photos or videos would reveal its transport or fallout.

⁴ See Exhibit C: Deposition of Paolo Zannetti at pp. 76:21-23

⁵ *Id.* at pp. 63:8-12; 71:1-6

⁶ *Id.*, e.g., at pp. 208:18-209:3.

⁷ *Id.* at pp. 24:16-23

⁸ *Id.* at pp. 25:3-5

1. Dr. Zannetti fails to cite to a single authority to support his opinion that an air modeler or engineer should or must compare qualitative evidence such as videos or photos to a quantitative air model.

Dr. Zannetti's critiques stem largely from his review of photos and videos of the fires, but he has no authority that an air modeler or engineer should or must perform such a comparison. Plaintiffs' expert engineer William Auberle clearly testified that engineers are not required to look at photos or other snapshots of events and modify their model based on such photographic evidence.⁹ Despite not being an engineer, however, Dr. Zannetti disagrees and asks this Court to ignore sound scientific modeling in favor of a review of photos¹⁰ and videos with many problems. However, Dr. Zannetti never cites to any authority for his purported methodology in any field.

Ultimately, when asked if he had any authority for his position that an engineer modeling an emissions event must compare photos and videos to a model, Dr. Zannetti testified no.¹¹ Dr. Zannetti asks this Court to simply take his word that this type of analysis is sound and in fact required. However, the Federal Rules of Evidence and basic scientific principles simply do not support Dr. Zannetti's approach to eyeball the impact. Using comparisons of limited qualitative information to quantitative models is not generally accepted within the engineering community for air modeling, is unreliable, and will not help resolve any issue in the case.

2. Dr. Zannetti admits that there are issues with the accuracy or reliability of photos, but chose that type of evidence over running his own model.

Photos and videos form the basis of Dr. Zannetti's opinions, but he admits that photographs and videos can have problems. Dr. Zannetti explained that a "two-dimensional representation of a three-dimensional event is always questionable" and noted that angle of the view can cause

⁹ See Exhibit D: Deposition of William Auberle at pp. 234:19-24

¹⁰ These photos and videos provide only a limited snapshot and do not include nighttime depictions beyond one grainy photo. See Exhibit B at pp. 61-65.

¹¹ See Exhibit C at pp. 207:24-12

problems.¹²

Despite a fundamental understanding that photos of an event have issues, Dr. Zannetti concludes that those issues are not present here.¹³ However, of the photographs he relies on, Dr. Zannetti does NOT know:

- The exact location where any photo was taken¹⁴
- The angle at which any photo was taken¹⁵

Dr. Zannetti did not bother to contact any of the photographers¹⁶ to determine if their photos accurately depicted the events as he interpreted them or suffered from the very problems Dr. Zannetti admits are at issue with photographs. Instead, he testified that information on the angle is “not really needed to make the point I’m trying to make here.”¹⁷

Additionally, Dr. Zannetti disregarded photos that were less helpful for his conclusions, including one used by the Houston Department of Health,¹⁸ by labeling them “difficult to interpret” and criticizing the unknown angle at which they were taken.¹⁹ However, Dr. Zannetti did not apply the same level of scrutiny to photos that were helpful for his opinions. There is no sound scientific reason for Dr. Zannetti’s approach.

3. Dr. Zannetti’s opinions on photographic visibility of the particulate matter spread do not align with the fact that PM 2.5 is not visible to the naked eye.

Despite relying heavily on photographs and videos to support his opinions, Dr. Zannetti never explains in his report that that PM 2.5 (the size of particulate matter in Dr. Auberle’s Figure 1 model) is not visible to the naked eye. When questioned in his deposition, Dr. Zannetti discussed

¹² See Exhibit C at pp. 209:8-14.

¹³ *Id.* at pp. 209:8-21

¹⁴ *Id.* at pp. 210:8-15

¹⁵ *Id.* at pp. 210:16-20

¹⁶ *Id.* at pp. 210:21-23

¹⁷ *Id.* at pp. 210:210:16-20; 215:17-216:5.

¹⁸ See Exhibit E: Ex 10 to Deposition of Paolo Zannetti, final slide

¹⁹ Exhibit C at pp. 214:20-215:16

the size of PM 2.5:

Q. Is PM 2.5 visible to the naked eye?

A. No.

Q. Can you describe the size of it for me?

A. If I remember well, a human hair is about 60, 80 microns. So we're talking about something that is 30 times smaller than a human hair.²⁰

Summed up, part of Dr. Zannetti's opinion is that after reviewing a limited number of photos that are inherently questionable, he does not see particulate matter (some of which is invisible to the naked eye), and thus, the massive ITC fires had limited to no impact on the neighboring community. None of this is based on science. None of this is supported by authority. Dr. Zannetti simply asks this Court to take his word given his years of experience (in a non-engineering field). This does not satisfy the Federal Rules of Evidence or *Daubert*.

B. Dr. Zannetti's reliance on limited and unreliable sampling data is inappropriate, unreliable, and presents an incomplete version of events.

Dr. Zannetti bases part of his conclusions regarding the air modeling on limited and unreliable testing data during the fires. However, these opinions are not scientifically sound and are not relevant given the issue he attempts to address— Dr. Auberle's models. Given these issues, this Court should exclude Dr. Zannetti's opinions.

1. Dr. Zannetti lacks a scientifically supported and accepted methodology for using limited testing data to critique Mr. Auberle's air models.

First, like with his eyeball analysis of photographs and videos of the plume, Dr. Zannetti fails to explain why or cite to any authority that an engineer or other scientist should or must compare random and limited testing data to compare to air models. Instead, Dr. Zannetti once again asks this Court to take his word for it as "common knowledge" without any citation in his

²⁰ Exhibit C at pp. 203:21-204:1

report or at his deposition:

Q. Have you cited to any authority in your report that says an engineer modeling an emissions event must compare his model to air-monitoring data?

A. I don't have a scientific authority or citation in front of me right now. It is a common knowledge that verification of a model, any model with measurement is a must in the scientific world.

Q. Okay. But as you sit here today, there are none that you've cited to in your report and you cannot point one -- point me to one?

A. I don't have one in front of me, yeah.²¹

Dr. Zannetti does not take the time to do his own models and say what he believes accurately depicts the impacts of the massive fires. Instead, he uses pieces of information of varying quality and utility while ignoring other evidence to distract the Court from what is clear—the fires at ITC had a significant impact on the community. Dr. Zannetti did not design a sampling plan to test or verify any air model in this case. Without that, he simply relies on the incomplete and unreliable limited data set he presents from various sources.²² Dr. Zannetti does not cite to any authority for his methodology. Ultimately, the materials that he seeks to use to form the basis of his opinions simply are just not sufficient under the Federal Rules of Evidence and *Daubert*.

2. The testing data relied upon by Dr. Zannetti is rife with issues and is insufficient to come to any conclusions on the fires' impacts.

In materials cited to and relied upon by Dr. Zannetti, there are critiques of the very data he says definitively shows Mr. Auberle's models are incorrect. Multiple sources support that sampling during the ITC events was simply insufficient to come to conclusions about community impacts due to quantity or quality issues. However, he still charges forward and presents his critiques.

²¹ Exhibit C at pp. 208:8-209:3

²² For example, three stationary EPA monitors relied upon by Zannetti were all over 4 miles from the site.

a. Purple Air Monitoring Data is inherently unreliable, not accepted for regulatory purposes, and should not be allowed to form the basis of any opinions under Daubert and the Federal Rules of Evidence

Dr. Zannetti relies on purple air monitors to assist with his opinions. In the Goldman article cited by Dr. Zannetti, the use of data from purple air monitors is discussed: “Purple air monitors are neither professionally operated nor used for regulatory purposes.”²³ In his deposition, Dr. Zannetti agreed and testified:

- The EPA does not accept results from these monitors as valid for any regulatory purpose.²⁴
- He had no experience with purple air monitors prior to the Goldman article.²⁵
- Anyone can purchase a purple air monitor on the internet.²⁶
- No level of training or education is required to purchase a purple air monitor.²⁷
- He has never used a purple air monitor.²⁸
- He doesn’t know if a purple air monitor requires calibration or cleaning to perform correctly.²⁹
- He doesn’t know if the performance of purple air monitors and their sensors is impacted by extreme weather.³⁰

Even worse, Dr. Zannetti made no attempt to figure any of this information out before using this data in his report.³¹ Despite these issues and his lack of follow-up, Dr. Zannetti uses this data to help support his opinions.

²³ See Exhibit F: Exhibit 8 to Deposition of Paolo Zannetti at pp.9

²⁴ Exhibit C at pp. 149:1-9

²⁵ *Id.* at pp. 149:11-13

²⁶ *Id.* at pp. 149:14-16

²⁷ *Id.* at pp. 149:17-19

²⁸ *Id.* at pp. 149:23-150:1

²⁹ See Exhibit C at pp.150:2-4

³⁰ *Id.* at pp. 150:24-151:2

³¹ *Id.* at pp. 150:8-23.

b. Despite Dr. Zannetti's contention that there is sufficient data for his opinions, experts he relies upon disagree.

Overall, the consensus among scientists other than Dr. Zannetti appears to be that there was a significant problem with the lack of environmental testing data available during and after the ITC fires to determine the community impact. One news article referred to the air monitoring as "chaos."³² The article highlights: "Part of a nearby state air monitor was offline for some seven hours during the crisis for a quality check."³³ Agencies and officials championed the need for additional monitoring sites and equipment in Harris County and in Houston generally.³⁴

In the article cited by Dr. Zannetti, Dr. Goldman and her team concluded:

Monitoring data gaps limited our ability to assess potential health effects of the fire; however, this does not suggest that industrial fires have minimal or no impacts on community exposure.³⁵

...

Even in this region, one of the most densely monitored in the world, regulatory monitors are positioned to capture ambient, regional levels of pollution rather than the impacts of individual air pollution point sources. Hence, the monitoring networks critical to air pollution research often fail to capture the impacts of acute industrial events on fence-line communities.³⁶

Once again, when Dr. Zannetti finds something that does not support his opinions (even in materials he relies upon), he simply disregards it, says it doesn't make sense, or states it's scientifically unsound.³⁷

Q. So it's your understanding that the authors of this article say they do not have enough data; right?

A. To do what?

Q. To draw conclusions about the impact from the ITC fires?

³² See Exhibit F: Exhibit 9 to Deposition of Paolo Zannetti.

³³ *Id.* at pp. 2

³⁴ Exhibit E at pp. 41-43

³⁵ Exhibit F at pp. 1

³⁶ Exhibit F: Assessment of Air Pollution Impacts and Monitoring Data Limitations of a Spring 2019 Chemical Fire

³⁷ See Exhibit F; See also Exhibit C at pp. 165:10-180:6.

A. I understand that is what they are saying.

Q. Okay.

*A. And I understand that that is not true.*³⁸

When questioned about whether he could cite to any paper or other authority that shares his opinions on the quantity of data in this case, Dr. Zannetti he initially stated it was “self-evident”³⁹ and then was forced to admit he could not:

Q. My question is, you can't cite to any scientific paper today, as you sit here, and there is not one cited in your report, as far as I know, that says or agrees with your opinion that there is a sufficient quantity of reliable particulate matter monitoring data to support your opinions and conclusions; is that correct?

*A. I cannot cite any paper that explicitly said that.*⁴⁰

In this instance, Dr. Zannetti doesn't just ask this Court to believe his unsupported conclusion, he says that we should disregard the peer-reviewed and published article that he cited to and relied upon for his opinions that happens to disagree with him. This defies logic and fails under *Daubert*.

C. Dr. Zannetti ignores significant and obvious data that supports on the ground impacts within the areas depicted in Mr. Auberle's isopleths.

In another source cited to by Dr. Zannetti, the Houston Health Department notes an uptick in emergency room hospital visits for respiratory issues and attributes this to PM 2.5.⁴¹ This is inconsistent with Dr. Zannetti's position that somewhere between 80 to 90 percent of the materials from the fire went aloft and had no ground impacts.⁴² Dr. Zannetti could have also reviewed the over 3000 Plaintiff Fact Sheets in this case from personal injury plaintiffs to help substantiate the actual on the ground impacts, if that was truly his goal. But he didn't. Like all of his other opinions, when information disagrees with his conclusions, he dismisses it.

³⁸ Exhibit C at pp. 179:23-180:6

³⁹ *Id.* at pp. 184:4-8

⁴⁰ *Id.* at pp. 184:17-24

⁴¹ Exhibit E at pp. 20-26

⁴² Exhibit B at Section 10.2

D. Dr. Zannetti's report is full of *ipse dixit* opinions that he cannot support with any authority.

Dr. Zannetti's report fails to cite to any authority for most contentions and instead makes sweeping pronouncements based on the word of Dr. Zannetti alone. Dr. Zannetti was unable to cite to authority for the following opinions or positions underlying his opinions:

- AERMOD should not be used to model large fires⁴³
- The use of point sources with AERMOD to simulate a large fire is scientifically unreliable and incorrect⁴⁴
- The use of a polar receptor grid in this type of situation is inappropriate⁴⁵
- The exit velocity of 1 m/s is extremely low for this fire.⁴⁶
- An engineer doing modeling must specify a separate file of hourly emission rates for sources in a model run.⁴⁷
- It is mandatory in air pollution sciences and more generally in computer-modeling sciences to use measurements when available to evaluate the performance of a model.⁴⁸
- An engineer modeling an emissions event must compare his model to air monitoring data.⁴⁹

For each of these points, Dr. Zannetti simply says he doesn't "feel the need of citing any authority"⁵⁰ and that we should take his word for it. However, the law requires more.

⁴³ Exhibit C at pp. 196:23-197:2

⁴⁴ *Id.* at pp. 200:5-25

⁴⁵ *Id.* at pp. 220:21-221:10 ("I don't feel the need of citing any authority.")

⁴⁶ *Id.* at pp. 222:22-25.

⁴⁷ *Id.* at pp. 230:9-17

⁴⁸ *Id.* at pp. 235:3-10

⁴⁹ *Id.* at pp. 208:18-209:3

⁵⁰ *Id.* at pp. 220:24-25,

1. Dr. Zannetti's conclusion that AERMOD is not equipped to model a large fire is *ipse dixit* and contrary to industry practice.

An overarching critique of Mr. Auberle's models by Dr. Zannetti is that AERMOD is wholly inappropriate for modeling a large fire. However, Dr. Zannetti offers no support for this statement other than his own experience. Dr. Zannetti has modeled only a limited number of fires. During his deposition, he recalled 3 or less fires he had modeled in his over 50-year career.⁵¹ Additionally, Dr. Zannetti had not familiarized himself with the large Arkema plant fire events in the wake of Hurricane Harvey where Judge Keith Ellison of the Federal District Court for the Southern District of Texas accepted a model run on AERMOD as the basis for the impacted class area.⁵²

Despite a lack of experience and scientific authority, Dr. Zannetti made unequivocal statements in his report and deposition about Dr. Auberle's use of AERMOD:

*Because of the reasons just discussed, the methodology used by Mr. Auberle - i.e., the use of point sources with AERMOD to simulate a large fire - is scientifically unreliable and incorrect.*⁵³

...

*First, he erroneously models the fire plume using AERMOD, which is not equipped to model a large fire.*⁵⁴

Dr. Zannetti admitted he cannot cite any authority for these opinions:

Q. Okay. But, as you sit here today, you cannot cite to any scientific paper or other authority that says that AERMOD should not be used to model emissions from large fires; is that correct?

A. That is correct.

⁵¹ Exhibit C at pp. 63:8-12; 71:1-6

⁵² See *Corey Prantil et al. v. Arkema France S.A., et al.*, No. 4:17-cv-02960, U.S.D.C. for the Southern District of Texas, specifically, Plaintiffs' Motion for Class Certification, R. Doc. 264, and Memorandum & Order, R. Doc. 316.

⁵³ Exhibit B at pp. 59

⁵⁴ *Id.* at pp. 104

There is no way to independently verify Zannetti's conclusions, because they are based on no methodology, lack of citation to authority, and are based on flawed "evidence." As a result, his opinions should be excluded as pure *ipse dixit*.

CONCLUSION

Expert opinions offered to this Court cannot be accepted merely because a scientist has multiple degrees or has worked in a field for a period of time. Under the Federal Rules of Evidence and *Daubert*, an expert opinion must be both relevant and reliable. Dr. Zannetti's opinions are neither and represent the exact type of *ipse dixit* opinions Daubert intends to keep out. This Court should not just take Dr. Zannetti's word for his sweeping critiques in this case. For the foregoing reasons, this Court should exclude Dr. Zannetti's opinion in this case.

DATED: September 16, 2022

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CERTIFICATE OF SERVICE

I hereby certify that on September 16, 2022, I served a true and correct copy of the foregoing document upon counsel of record by using the the Court's ECF service in compliance with Federal Rule of Civil Procedure 5 and Local Rule 5.1:

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